

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of:)	
)	
Revision of the Commission's Rules to Ensure)	CC Docket No. 94-102
Compatibility with Enhanced 911 Emergency)	
Calling Systems)	
)	
ALLTEL Communications, Inc.)	TRS No. 806258
Petition for Waiver of Sections 20.18(e) and)	
(g) of the Commission's Rules)	

To: The Commission

**ALLTEL COMMUNICATIONS, INC. PETITION FOR WAIVER OF SECTIONS
20.18(e) AND (g) OF THE COMMISSION'S RULES -- SECOND SUPPLEMENT**

ALLTEL Communications, Inc. ("ALLTEL"),¹ on behalf of itself and its various subsidiaries and affiliates, hereby supplements its July 25, 2001 request (as amended on November 30, 2001) seeking limited waiver of the Commission's rules governing the deployment of Phase II E-911 capabilities.² The purpose of this filing is to update the Commission regarding ALLTEL's Phase II testing and deployment efforts and to modify its proposed schedule for its network upgrades and the provision of Phase II service to individual PSAPs to comport with the availability of compliant hardware and software from its vendors and the status of Assisted-GPS ("AGPS") technology.

¹ The instant filing is submitted on its own behalf and that of its current Commission-licensed subsidiaries and affiliates, including those licensees affiliated with ALLTEL Communications, Inc. by virtue of their common ownership and ultimate control by ALLTEL Corporation.

² See ALLTEL Communications, Inc. Petition for Waiver of Sections 20.18(e) and (g) of the Commission's Rules, filed July 25, 2001 in CC Docket No. 94-102 ("ALLTEL Petition"); Supplement to ALLTEL Communications, Inc. Petition for Waiver of Sections 20.18(e) and (g) of the Commission's Rules, filed Nov. 30, 2001 in CC Docket No. 94-102 ("First Supplement").

I. BACKGROUND/SUMMARY

In its Petition (as amended), ALLTEL seeks a limited, temporary waiver of the Commission's E-911 Phase II rules governing carriers' deployment of "handset-based" solutions. As amended herein, ALLTEL requests authority to deploy an AGPS solution in accordance with the following timetable:

- *Handset Activations (No Modifications)*. ALLTEL requests that it be allowed to: begin selling and activating AGPS-capable handsets by June 30, 2002; meet the 25% sales/activation benchmark by September 30, 2002; meet the 50% benchmark by March 31, 2003; and meet the 100% benchmark by September 30, 2003. ALLTEL has not sought any waiver of the 95%/December 31, 2005 market penetration deadline.
- *Switch Upgrades (No Modifications)*. ALLTEL requests that it be allowed to deploy software upgrades for its switches as follows: for Lucent switches, by June 30, 2002; for Nortel switches, by June 30, 2002; and for Motorola switches, by December 31, 2002.
- *PDE/MPC Deployment*. As discussed *infra* at Section II.C, ALLTEL will deploy the remaining AGPS network components (e.g., the position determining equipment ("PDE") and mobile positioning center ("MPC")) for *all* markets by September 30, 2002 (formerly June 30, 2002 for Lucent/Nortel, December 31, 2002 for Motorola).
- *Initiation of Deployment to PSAPs*. As discussed *infra* at Section II.C, ALLTEL's network will be Phase II-capable by September 30, 2002 for Lucent/Nortel markets, by December 31, 2002 for Motorola markets. ALLTEL will immediately thereafter begin the steps needed to provide Phase II service in response to valid pending PSAP requests.
- *Provisioning Service to PSAPs*. As discussed *infra* at Section II.C, for Lucent and Nortel markets, ALLTEL will have fully addressed the backlog of pending valid Phase II requests and will be providing service to Phase II-capable PSAPs by March 31, 2003 or within 6 months of a valid request, whichever is later, and for Motorola markets by September 30, 2003 or within 6 months, whichever is later.

In October 2001, the Commission granted five of the six nationwide carriers' waiver requests, subject to various conditions.³ Two CDMA-based nationwide carriers -- Verizon

³ See *Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Request for Waiver by Verizon Wireless, Order*, CC Docket No. 94-102, FCC 01-299 (rel. Oct. 12, 2001) ("Verizon Order"); *Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Request for Waiver by* (continued on next page)

Wireless and Sprint PCS -- have selected the same handset-based AGPS technology as ALLTEL and utilize many of the same vendors (although ALLTEL has deployed predominantly Motorola switches). On February 1, 2002, these carriers reported to the Commission of a number of potential problems that could delay Phase II deployment, including delays in LEC provisioning of facilities and the need to test and refine various components of the AGPS solution.⁴ As discussed below, ALLTEL, which has proceeded with its own independent Phase II deployment efforts with the same vendors, has encountered the same issues and technology hurdles reported by other carriers. (Indeed, in some cases ALLTEL has been instrumental in driving vendors' development efforts.) ALLTEL is filing this second supplement to apprise the Commission of information recently obtained from its vendors and the results of its ongoing testing and deployment activities, and to modify its pending waiver request accordingly.

II. UPDATE ON ALLTEL DEPLOYMENT EFFORTS AND MINOR MODIFICATION TO E-911 PHASE II DEPLOYMENT SCHEDULE

ALLTEL has consistently advised the Commission that the target dates for meeting the deployment benchmarks are dependent on its vendors' abilities to make the necessary compliant software and compliant equipment generally available ("GA").⁵ ALLTEL's experience confirms that of Verizon Wireless and Sprint PCS that AGPS-based Phase II-compliant products are becoming increasingly available for CDMA-based carriers and, indeed, that Phase II AGPS technologies for CDMA carriers appear to be the most promising for delivery of accurate ALI to PSAPs. ALLTEL's experience also confirms that vendors, by necessity, continue to fine-tune

Sprint PCS, Order, CC Docket No. 94-102, FCC 01-297 (rel. Oct. 12, 2001)(*"Sprint PCS Order"*).

⁴ See Verizon Wireless, Report filed Feb. 1, 2002, at 2, 4 (discussing issues regarding Compaq PDE and LEC provisioning); Sprint PCS Report filed Feb. 1, 2002, at 6-7 (discussing issues regarding Lucent switches, PSAP capabilities and LEC provisioning).

⁵ ALLTEL Petition at 3 n.3, 8-16; First Supplement at 2.

these products as they are tested and deployed in carriers' individual networks.⁶ ALLTEL's independent testing and deployment efforts have disclosed deficiencies requiring a minor modification in its pending waiver request.

A. Handset Deployment – No Changes

ALLTEL is currently on schedule with the deployment of AGPS-capable handsets and, based on information obtained from vendors, is not now requesting additional time beyond the sale and activation benchmarks proposed in its waiver request. ALLTEL is currently testing the Audiovox CDM9155, which, assuming Audiovox can meet its commitments, ALLTEL will begin selling to customers by June 30, 2002.⁷ Additional handsets will be tested beginning April 2002 and sales will begin throughout 2002 and into 2003, as indicated in the table below.

Company	Test Units	Commercial	Chipset
Motorola (V120e)	April 2002	June 2002	5100
Motorola (720)	2Q 2002	3Q2002	5100
Nokia (3xxx)	1Q 2003	1Q 2003	Nokia
LG (TM240)	May 2002	July 2002	5100
LG (TM540)	July 2002	October 2002	5100
LG (TM540c)	October 2002	January 2003	5100
Kyocera (2335/K1.5)	Mar 2002	June 2002	5100
Kyocera (3235)	August 2002	October 2002	5100
Kyocera (7135)	August 2002	October 2002	5100

⁶ As the U.S. Department of Transportation affirmed in its E-911 summit last week, "Implementing a wireless E9-1-1 system that identifies the location of callers is complex because of the new technology it requires and the changes that will be necessary in the processes for handling and responding to emergency calls." U.S. Dept. of Transportation, News Release, *U.S. Transportation Officials Call For National Commitment to Wireless E9-1-1 System*, April 8, 2002, available at <www.dot.gov/affairs/fhwa0702.htm>.

⁷ ALLTEL notes that Audiovox and possibly other handset vendors were reportedly adversely affected by defective QUALCOMM MSM5100 chipsets. ALLTEL is looking into (but is uncertain) of the impact of this development on the availability of Phase II-compliant Audiovox handsets for ALLTEL and on ALLTEL's handset deployment schedule. See article available at <www.rcrwirelessnews.com/cgi-bin/news.pl?newsId=2885>.

Audiovox (9155x)	February 2002	March 2002	5100
Audiovox (9500)	May 2002	July 2002	5100
Audiovox (8300)	April 2002	July 2002	5100
Audiovox (8500)	August 2002	October 2002	5100

In its First Supplement, ALLTEL apprised the Commission of its testing efforts in Jacksonville, Florida on its Lucent switch. ALLTEL notes that although the testing in Jacksonville focused on the location capability for ALI-capable handsets, as promised ALLTEL has separately evaluated the performance of potential interim measures EFLT and will continue to evaluate this and other technologies to support legacy handsets as additional testing takes place with the remaining switch vendors. ALLTEL cautions, however, that its evaluation and implementation of such technologies would require support and compatibility across multiple vendors. Experience indicates that such capability varies among vendors and would limit the ability for ALLTEL to offer support across the network.⁸

B. Switch Upgrades – No Changes

ALLTEL is currently on schedule with its deployment of switch upgrades, in accordance with the request as amended on November 30, 2001 with respect to Lucent switches. ALLTEL has since obtained the Lucent release, has aggressively deployed the software in its switches to prepare for Phase II activation and will meet the scheduled date provided in the earlier filing.⁹ Based on information more recently obtained from vendors, ALLTEL is not at this time requesting additional time to deploy the switch upgrades for its various vendors.

⁸ Verizon Wireless reported in February that Lucent has been working to support EFLT in its switches, and on April 9, 2002, reported that Nortel will accommodate EFLT as well. *See* Verizon Wireless, Enhanced 911 Status Report, filed February 1, 2002; Verizon Wireless, Supplement to Petition for Reconsideration, filed April 9, 2002, at 7-8. EFLT is not available for Motorola switches, however, which constitute over 80 percent of ALLTEL's switches, and indeed, Verizon Wireless is not obligated to deploy EFLT in its Motorola switches.

⁹ *See* First Supplement at 2-3.

Indeed, ALLTEL is at the forefront of industry's testing and deployment efforts. ALLTEL has agreed to conduct the first national FOA (First Office Application) nationally for Motorola Release S16.1, which includes the E911 Phase II feature. Testing of the Motorola E911 Phase II feature will take place after ALLTEL has procured a compliant MPC/PDE vendor. ALLTEL has also agreed in principle to conduct the first national FOA of the Nortel E911 Phase II feature in the MTX10 release, although the parties are discussing further the details of the test.¹⁰ Following is an overview of the anticipated availability of the requested products:

VENDOR	MSC Release		MSC E911 Phase II Feature	
	FOA	GA	FOA	GA
Motorola	March 2002	2Q2002	2Q-3Q2002	2Q-3Q2002
Lucent	N/A	Nov. 9, 2001	N/A	Nov. 9, 2001
Nortel	N/A	Dec. 15, 2001	2Q2002	2Q2002

C. Fine-Tuning the PDE/MPC Equipment and Software Requires Modification of ALLTEL's Target Dates

ALLTEL had previously set forth a June 30, 2002 target date to begin initiating Phase II service to PSAPs served via Lucent and Nortel switches, as well as December 31, 2002 for PSAPs served via Motorola switches. These target dates were based on the expectation that PDE/MPC software and equipment deployment and testing, *and* PSAP-specific efforts could be deployed concurrently with switch upgrades. ALLTEL's testing and deployment efforts, however, considered in conjunction with further information from vendors, have revealed that these tasks cannot occur simultaneously.

Despite its limited resources, ALLTEL has been actively involved in testing and evaluation to ensure the accuracy and reliability of PDE and MPC technologies necessary to

¹⁰ If Nortel denies ALLTEL's request to conduct the FOA, Nortel has indicated that the GA date for the MTX10's Phase II feature will be June 28, 2002. ALLTEL will apprise the Commission if Nortel's actions necessitate a further amendment to its target date for Nortel switches.

deploy accurate Phase II information to capable PSAPs. As reported in previous filings, ALLTEL has conducted multiple testing of a Lucent J-STD-036 standard compliant AGPS solution in its network in Jacksonville, Florida¹¹ during the latter half of 2001 and successfully performed location of multiple test-calls in several environments.¹² AGPS is a maturing technology, however, and the trial results indicated that additional product development was required before ALLTEL could begin deploying Phase II-compliant products in its network and providing compliant service to PSAPs.¹³ Additional testing was conducted during March 2002 to improve the AGPS solution in urban environments, as it was expected that any AGPS positioning method would perform less effectively in an urban environment than in a suburban or rural environment due to multipath propagation.¹⁴

The March 2002 testing also included a J-STD-036 compliant MPC from Lucent for which the GA date was dependent on the test results. These test results did not meet ALLTEL's expectations for compliance and additional refinement to the MPC/PDE is necessary; ALLTEL and Lucent have established a new target date for a compliant product, but a GA date has not yet been established for all of the necessary features required for the MPC. ALLTEL notes, however, that full end-to-end testing of this product was not performed due to a decision by BellSouth not to support the standard E2-interface between the MPC and the ALI at that time due to regulatory concerns (although ALLTEL understands that this issue may since have been

¹¹ ALLTEL Waiver Request, Docket No. 94-102, (July 25, 2001) at 20.

¹² Supplement to ALLTEL Waiver Request, Docket No. 94-102, (Nov. 30, 2001) at 4.

¹³ The specific trial results are subject to a non-disclosure agreement.

¹⁴ S. Fischer, H. Koorapty, E. Larsson, A. Kangas, "System Performance Evaluation of Mobile Positioning Methods," in *Proc. of IEEE Vehicular Technology Conference*, May 1999, Houston, TX, at p. 1962, 1964. See also J. Caffery, Jr. and G. Stuber, "Overview of Radiolocation in CDMA Cellular Systems," *IEEE Communications Magazine*, Vol. X, No. 4, April 1998 at 41.

resolved). Finally, new Audiovox handsets incorporating the MSM5100 chipset were introduced into ALLTEL's testing efforts and showed overall benefits in increased accuracy.

As part of its technical due diligence and based on its experience derived from the Lucent testing, ALLTEL has engaged Compaq to verify the accuracy of the SnapTrack PDE. It is expected that results from this trial will be available after May 13, 2002 after which ALLTEL will select its compliant PDE/MPC vendor. ALLTEL is nevertheless hopeful that the deficiencies of the Lucent PDE/MPC solution can be resolved well in advance of the initial March 31, 2003 target date for launching service to individual PSAPs.¹⁵

ALLTEL estimates that, once the testing is complete and a compliant vendor selected, it will take approximately 2-3 months to deploy the PDE and MPC functionalities into its network. Nevertheless, as a result of the information derived from its independent testing efforts, ALLTEL has concluded that deployment of compliant PDE/MPC is not feasible by the original June 30, 2002 target date and that a short additional time period is required. In light of these factors, ALLTEL estimates that the MPC/PDE will be commercially deployed throughout all its switches *by the end of 3Q2002*, and amends its waiver request accordingly. In addition, assuming that the Lucent and Nortel switch upgrades are completed on schedule and absent technical issues that arise with an individual PSAP, ALLTEL anticipates that it could provide service in targeted counties from its backlog of PSAP requests *by March 31, 2003 or within 6*

¹⁵ ALLTEL notes that it has not sought a waiver of the Commission's Phase II accuracy requirements, making the existence of a *compliant* PDE/MPC an absolute necessity. Indeed, ALLTEL's support of both Lucent's and Compaq's testing efforts may inure to the benefits of other small and mid-sized carriers by increasing the chances that such carriers will have multiple vendor selections for AGPS solutions – consistent with Commission objectives. *See Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Third Report and Order*, 14 FCC Rcd. 17388, ¶ 30 (1999).

months of the request, whichever is later, and amends its waiver request accordingly.¹⁶ With respect to ALLTEL's Motorola switches, however, different circumstances apply. Motorola is the vendor for over 80 percent of ALLTEL's switches, and while ALLTEL continues to verify the validity of many PSAP Phase II requests, a significant backlog has already developed and will likely continue to develop. ALLTEL anticipates that it will be able to comply with some requests, but not all, within the six-month period after December 31, 2002. As additional information becomes available regarding individual PSAP capabilities, ALLTEL will be better able to establish a deployment schedule for Motorola markets, but will be unable to meet all such requests within six months. In light of these factors, ALLTEL anticipates that for Motorola markets it could commence service for capable PSAPs *by September 30, 2003 or within 6 months of the request, whichever is later*.¹⁷ ALLTEL amends its waiver request accordingly.

III. ALLTEL'S DEPLOYMENT SCHEDULE REMAINS CONSISTENT WITH THE PUBLIC INTEREST AND THE COMMISSION'S STANDARDS FOR PHASE II WAIVER REQUESTS

Grant of ALLTEL's waiver request remains consistent with the public interest and with the Commission's guidelines for E-911 Phase II waiver requests.¹⁸ ALLTEL's request for waiver, as modified herein, remains specific, focused, and limited in scope; (2) ALLTEL has

¹⁶ An updated list of PSAP requests is attached. As Sprint PCS has noted, however, PSAP-by-PSAP implementation issues may arise that may require ALLTEL to take additional time "customize" a Phase II solution.

¹⁷ In this regard, ALLTEL notes that the Commission has afforded Verizon Wireless and Sprint PCS until December 31, 2002 to initiate service to PSAPs in Lucent or Nortel markets who request service prior to June 30, 2002 (and until March 31, 2003 for requests received prior to September 30, 2003 for Verizon Wireless' Motorola markets) – thus affording a considerable period of time after deployment of the network components of the AGPS technology to begin Phase II service to PSAPs. See *Verizon Order* ¶¶ 21, 38-41, 42; *Sprint PCS Order* ¶¶ 24, 38.

¹⁸ See *Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Fourth Memorandum Opinion and Order*, 15 FCC Rcd. 17442, 17457-58 (2000).

clearly taken concrete steps to come as close as possible to full compliance; and (3) ALLTEL continues to provide a clear path to full Phase II compliance.

From the outset, ALLTEL selected a handset-based solution and has established an aggressive and ambitious deployment schedule, particularly for a carrier of its size. As discussed above, ALLTEL continues to work in good faith with its vendors, and ALLTEL's deployment schedule continues to follow a path consistent with its vendors' capabilities and in line with the schedules approved for nationwide carriers Sprint PCS and Verizon Wireless, which use many of the same technologies and vendors as ALLTEL. Grant of the ALLTEL Petition, as amended herein, is consistent with the public interest.

CONCLUSION

Grant of ALLTEL's pending waiver request, as amended herein will serve the public interest, convenience and necessity and the Commission's objectives in this proceeding.

Respectfully submitted,

ALLTEL COMMUNICATIONS, INC.

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